

AMENDMENTS TO THE CLAIMS

Claims 1-35. (Canceled)

36. (Currently Amended) A method of designing a sigma-delta-modulator comprising a plurality of cascaded integrators and a comparator for signal ~~quantification~~quantization, said integrators and comparator defining a signal path, the method comprising the steps of:

(a) providing an input signal to an input of the modulator,

(b) determining signal amplitude at one or more outputs of the integrators,

and

(c) adjusting one or more signal gains along the path so that signal amplitude increases progressively along the signal path away from the input.

37. (Previously Presented) A method according to claim 36, adjusting signal gains on the two cascaded integrators immediately after the input, said two integrators being subject to adjustment in step (c).

38. (Previously Presented) A method according to claim 37, wherein signal amplitudes arising at outputs of said two cascaded integrators are less than 20% of a full scale output from said comparator.

39. (Previously Presented) A method according to claim 36, wherein the signal gains are adjusted by adjusting gains of said integrators.

40. (Previously Presented) A method according to claim 39, wherein the gains of said integrators are adjusted by adjusting feedback therearound.

41. (Currently Amended) A sigma-delta-modulator including a plurality of cascaded integrators and a comparator for signal quantization, said integrators and comparator defining a signal path, the sigma-delta-modulator being designed according to the method of claim 36the method including,

- (a) providing an input signal to an input of the modulator,
- (b) determining signal amplitude at one or more outputs of the integrators, and
- (c) adjusting one or more signal gains along the path so that signal amplitude increases progressively along the signal path away from the input.

42. (Previously Presented) A method of controlling a sigma-delta-modulator comprising a plurality of cascaded integrators, a comparator for signal quantification, and controlling means, the method comprising the steps of:

- monitoring the signal swing of an output signal of at least one of the plurality of integrators and determining if the monitored signal swing exceeds a predefined threshold value, and
 - in case the monitored signal swing exceeds the predefined threshold value, using the controlling means to reduce the output signal by a predefined factor or value so as to bring the monitored signal swing below the predefined threshold value, the predefined threshold value being associated with a maximum stable input amplitude of the sigma-delta-modulator.

43. (Previously Presented) A microphone module comprising a sigma-delta-modulator according to claim 41.

44. (Previously Presented) A mobile unit comprising a microphone module according to claim 43, wherein the mobile unit is selected from the group consisting of hearing aids, cellular phones, and head-sets.

45. (Previously Presented) A mobile unit comprising a sigma-delta-modulator according to claim 41, wherein the mobile unit is selected from the group consisting of hearing aids, cellular phones, and head-sets.